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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,706	01/24/2002	Dana Scranton	260/261 P01-0001	2073
34055	7590	03/10/2004	EXAMINER	
PERKINS COIE LLP POST OFFICE BOX 1208 SEATTLE, WA 98111-1208			SPISICH, MARK	
			ART UNIT	PAPER NUMBER
			1744	
DATE MAILED: 03/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/056,706

Applicant(s)

SCRANTON ET AL.

Examiner

Mark Spisich

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*db*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: (1) #216 as per page 9, line 1; and (2) #228 (paragraph 0044, line 2) (also noted that the purging nozzle is #230). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "262" has been used to designate both the "armature" (fig 2) and the latching cams (figs 4,6). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because (1) #240 in fig 6 is directed to an area above both the upper chamber 244 and the wafer 50, while it's described as a lower chamber; (2) there is a 2<sup>nd</sup> #212 (the one closer to the axis A) in fig 6 which does not appear to point to the upper wall. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities: (1) "upper chamber wall 214" (paragraph 0045 ,line 3) is incorrect; (2) "254" (paragraph 0054, line

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7) is wrong; (3) "258" (paragraph 0055, line 5) is wrong (because #258 is the lifting mechanism of the lower rotor; (4) "230" (paragraph 0055, line 7) is wrong because the purging nozzle is #230; and (5) "2345" (paragraph 0059, line 5) should be -- 245 --.

Appropriate correction is required.

#### ***Claim Objections***

4. Claim 8 is objected to because of the following informalities: there should be a space between "dryer" and "including" (claim 8, line 3). Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. Claims 2,6 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "First rotor" and "second rotor" (claims 2 and 6) lack antecedent. Claim 1 instead recited an upper and a lower rotor. "Upper and lower chamber members" (claim 12, line 1) lacks antecedent. Also, the "processing chamber" (claim 12, lines 1-2) was already recited in claim 8 (lines 9-10). "Bottom wall" (claim 13, lines 1-2) lacks antecedent. "Top wall" (claim 14, line 2) lacks antecedent. "Spacing members" (claim 15, line 1) lacks antecedent. Claim 15 should probably depend from claim 14 for this reason. Also, "outlet" (claim 15, line 1) lacks antecedent. Applicant should review the claims for any additional informalities.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shinbara et al (USP 5,485,644) in view of Thompson et al (USP 5,168,886). The patent to Shinbara discloses outer (2) and inner (3) brush stations as well as a rinser/dryer (4) and a unload station (5) with a number of robots (7) for transporting a wafer between the various parts of the "system". The patent to Shinbara discloses the invention substantially as claimed with the exception of with the exception of the structure of the rinser/dryer. The patent to Thompson discloses a wafer treating station which cleans the wafer by fluid contact as well as subsequently drying it and which includes a first chamber member (28) and a second chamber member (41) which are mounted for relative movement between a loading position and a processing position and wherein the first and second chamber, in the processing position, define processing chamber therebetween. It would have been obvious to one of ordinary skill in the art to have modified the rinser/dryer of Shinbara as taught by Thompson in that one of ordinary skill would recognize that the "system" could use any number of known rinser/dryers without deviating from the main concept of the system as defined by claim 17.

8. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinbara et al (USP 5,485,644) in view of Curtis et al (USP 6,318,385). The patent to Shinbara discloses first (2) and second (3) (claim 7) brush stations each having brushes for contacting the workpiece and a liquid supply as well as a rinser/dryer (4) and a robot (7) for transporting the workpiece between the various stations of the system. The

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patent to Shinbara discloses the invention substantially as claimed with the exception of the structure of the rinser/dryer. The patent to Curtis discloses a wafer rinser/dryer comprising upper (205) and lower (210) rotors which define a "capsule assembly" adapted to hold and spin a workpiece (55) and which include at least one inlet (220 or 230) and at least one outlet (312). It would have been obvious to one of ordinary skill to have substituted any known wafer rinser/dryer into the system of Shinbara as Shinbara teaches the basic combination and the patent to Curtis discloses a functionally equivalent rinser/dryer in the same environment. The patent to Curtis discloses a first inlet (220) and a second inlet (230) as in claim 2 as well as the outlet (312) as defined in claim 3 and a fluid supply system which supplies both rinsing fluid and drying fluid (abstract, lines 9-12) as in claim 4. The "capsule assembly" of Curtis further rotates about a vertical axis (claim 5) and the first rotor is contained within a head (400) (claim 6). With regard to claim 8, the patent to Curtis discloses the two chamber members (the two rotors 205,210) which when engaged define a processing chamber and which are movable relative to each other and further including a workpiece support assembly including a plurality of support members (240) and associated biasing member (430) (claim 9). The two chambers of Curtis are linearly movable relative to each other (claim 10) and at least one fluid inlet (220 or 230) as in claim 11 and wherein the chambers generally conform to the shape of the workpiece (claim 12). The patent to Curtis further discloses the cooperative pins (105) and spacing members (110) and further wherein the upper chamber includes an annular sidewall (235) (claim 16).

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**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Ravkin is pertinent to the basic components of the claimed "system" (brush stations, robot and rinse/dry station) and the other patents to wafer processing devices of the enclosed chamber type.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Spisich whose telephone number is (571) 272-1278. The examiner can normally be reached on M-Th (6-3:30), Alternate Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark Spisich  
Primary Examiner  
Art Unit 1744

MS